DOCUMENT RESUME

ED 035 916 CG 004 922

AUTHOR LERRIGO, MARION O.; SOUTHARD, HELEN.
TITLE A STORY ABOUT YOU.
INSTITUTION AMERICAN MEDICAL ASSOCIATION, CHICAGO, ILL.; NATIONAL EDUCATION ASSOCIATION, WASHINGTON, D.C.
PUB DATE 66
NOTE 45P.
AVAILABLE FROM AMERICAN MEDICAL ASSOCIATION, 535 NORTH DEARBORN STREET, CHICAGO, ILLINOIS 60610 ($.40 PER SINGLE COPY; 50-99, $.38 EACH; 100-499, $.35 EACH; 500-999, $.33 EACH; 1,000 OR MORE, $.30 EACH)

EDRS PRICE EDRS PRICE MF-$0.25 HC NOT AVAILABLE FROM EDRS.
DESCRIPTORS *CHILD DEVELOPMENT, CHILDHOOD, EMOTIONAL DEVELOPMENT, *GROWTH PATTERNS, *HEREDITY, LEARNING, PHYSICAL DEVELOPMENT, *SEX EDUCATION, TEACHING

ABSTRACT

THIS PAMPHLET DESCRIBES THE PROCESS OF HUMAN GROWTH FROM CONCEPTION TO ADOLESCENCE AND IS DESIGNED FOR USE IN GRADES FOUR THROUGH SIX. CHAPTER ONE DISCUSSES GROWTH AND CHAPTER TWO DISCUSSES THE BEGINNING OF LIFE. CHAPTER THREE IS CONCERNED WITH GROWTH FROM CONCEPTION ON TO BIRTH. THE BIRTH OF THE BABIES, BOTH HUMAN AND OTHER MAMMALS, AND HELPING AT HOME WHEN A NEW BABY COMES ARE DISCUSSED IN THE NEXT CHAPTER. CHAPTER FIVE GIVES A BRIEF DISCUSSION OF BOYS AND GIRLS AND HEREDITY. CHAPTER SIX COVERS GROWTH FROM A BABY TO A SCHOOL CHILD, AND DISCUSSES LEARNING LANGUAGE, USAGE, FEELINGS AND HOW THEY CHANGE, AND FRIENDSHIPS. A CHAPTER ON BODY CHANGES IN ADOLESCENCE COMPLETES THIS PAMPHLET. (KJ)

— ED035916 —

PROCESS WITH MICROFICHE AND PUBLISHER'S PRICES. MICROFICHE REPRODUCTION ONLY.

a story about—

you

CG004922

© *Copyright, 1966 By* AMERICAN MEDICAL ASSOCIATION

Permission to reproduce this copyrighted work has been granted to the Educational Resources Information Center (ERIC) and to the organization operating under contract with the Office of Education to reproduce documents included in the ERIC system by means of microfiche only, but this right is not conferred to any users of the microfiche received from the ERIC Document Reproduction Service. Further reproduction of any part requires permission of the copyright owner.

Distributed by

AMERICAN MEDICAL ASSOCIATION
535 NORTH DEARBORN STREET
CHICAGO, ILLINOIS 60610

NATIONAL EDUCATION ASSOCIATION
1201 SIXTEENTH STREET, N.W.
WASHINGTON, D.C.

ED035916

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

PROCESS WITH MICROFICHE AND PUBLISHER'S PRICES. MICROFICHE REPRODUCTION ONLY.

a story about you

Prepared for the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association

by
Marion O. Lerrigo, Ph.D.
Helen Southard, M.A.

medical consultant
Milton J. E. Senn, M.D.

This series of pamphlets is prepared to help parents and those other adults who may have responsibility and concern in assisting children to form sound ideas and attitudes about family living, including sex education.

The Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association publishes this series. We believe the home is the ideal place for sex education of children and youth. It is also recognized that many parents consider it desirable for the church, the school, or other responsible groups in the community to supplement this education. Thus, the ways in which this series is used will of necessity be dependent upon the judgment of individual parents and of local community groups. This focus of responsibility must be honored and these booklets must in no instance be used without full approval and joint planning from home, school and community.

SEX EDUCATION SERIES

PARENTS' RESPONSIBILITY, for parents of young children of preschool and early school age.

A STORY ABOUT YOU, for children in grades 4, 5, and 6.

FINDING YOURSELF, for boys and girls of approximately junior high school age.

APPROACHING ADULTHOOD, for young people of both sexes (about 16 to 20 years of age).

FACTS AREN'T ENOUGH, for adults who have any responsibility for children or youth that may create a need for an understanding of sex education.

CONTENTS

PAGE

Chapter 1. **GROWING FAST AND SLOW** 7

Chapter 2. **HOW YOUR LIFE BEGAN** 10

Living Things Make New Life
Egg Cells Give Life from the Mother
Sperm Cells Give Life from the Father
How the Sperm Cell Finds the Egg Cell
Where Did Life First Come From?

Chapter 3. **GROWING FROM AN EGG INTO A BABY** 16

How the Baby Grows in the Uterus
How the Mother's Body Helps the Baby to Grow

Chapter 4. **THE BABY IS BORN** 21

The Mother Helps the Baby to be born
When Animals Have Babies
Helping at Home When the New Baby Comes
Keeping a Record of Births

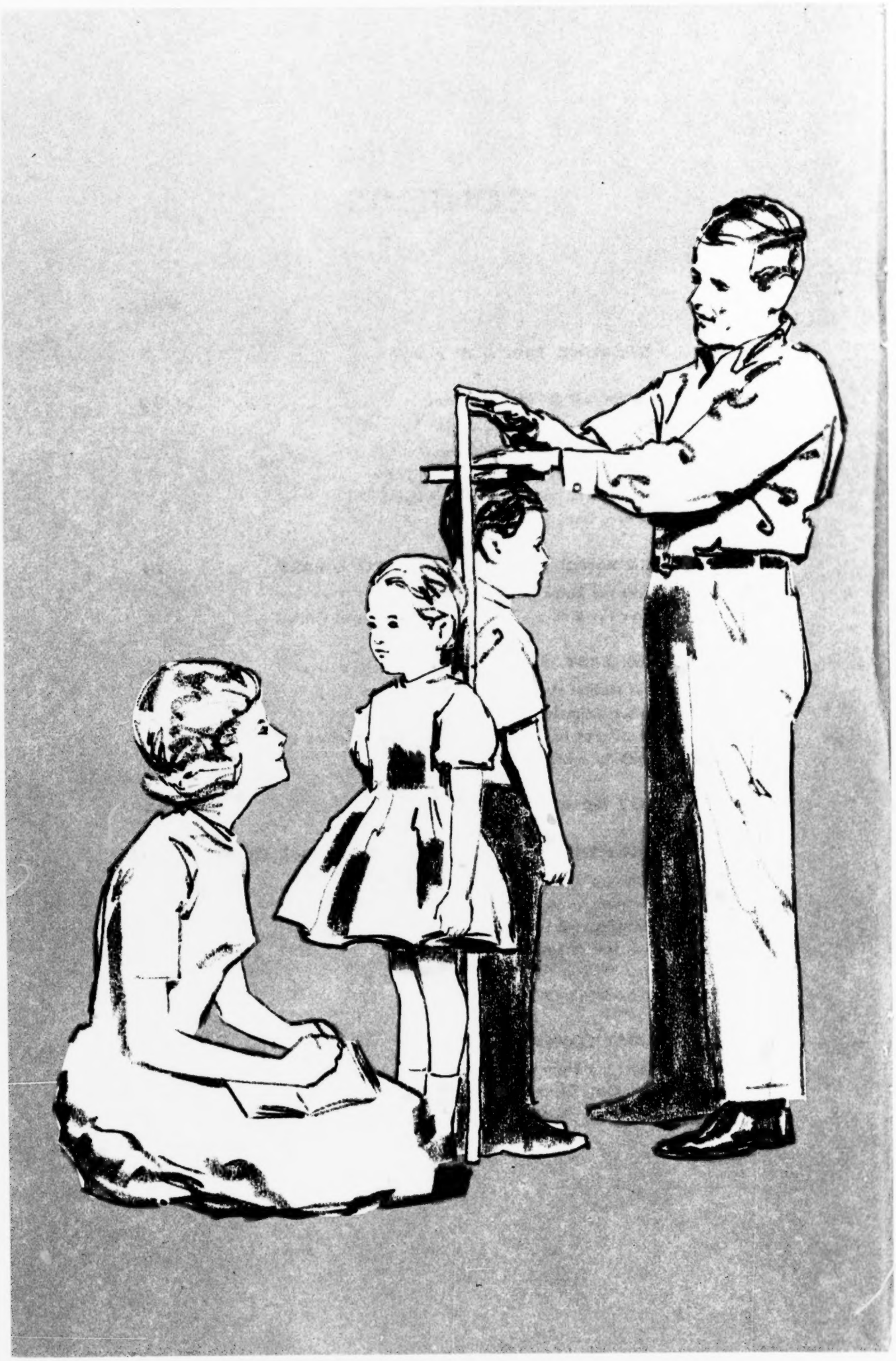
Chapter 5. **BOY OR GIRL?** 26

Chapter 6. **GROWING FROM A BABY TO A SCHOOL CHILD** 28

Growing Taller
Growing Stronger
Growing and Learning Go Together
Your Use of Language Grows
Your Feelings Change and Grow Up
Your Friendships Will Change

Chapter 7. **WHAT COMES NEXT?** 38

How Your Body Changes in Adolescence
How Girls Change in Adolescence
How Boys Change in Adolescence



Chapter 1

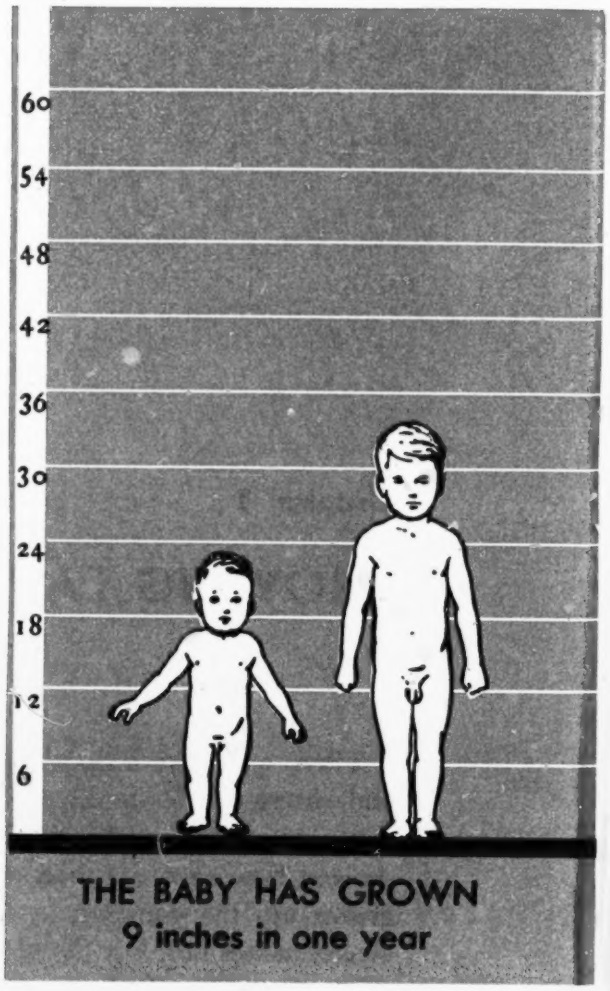
GROWING FAST AND SLOW

There was once a door-frame in a home where all the brothers and sisters of the family measured their height many times when they were children. Finally it was covered with pencil marks that showed how each one had grown. When all of the children were grown up, the youngest in the family had grown to be five feet, eleven inches tall, but the oldest one stopped at five feet and never grew any taller. Each one was different, but all of them were well and strong.

Growing taller is only one of the ways of growing that you will read about in this book. The growth of boys and girls is such a remarkable thing that no one knows all about it yet, although it goes on all the time. Clever men can make jet planes and electric "brains," but no one can manufacture a boy or a girl like you. You have to grow!

Here is one of the curious things that we can't explain fully. Most babies are about twenty inches long when they are born. In the first year after they are born, they grow nearly half that much, often about eight or ten inches. In their second year, they usually grow only about five or six inches. After that, children grow still more slowly. But *why* do babies grow very fast at first, and then more slowly? No one knows exactly.

It is just as well that you grow the way you do. If boys and girls kept on adding half their height each year, they would soon be giants. In that case, a three-year-old child might be over five feet tall! But he would not know how to talk, think, or act like a grown person. Fortunately your growth slows down, and you have time to learn to think and act in a grown-up way before you reach your adult size.



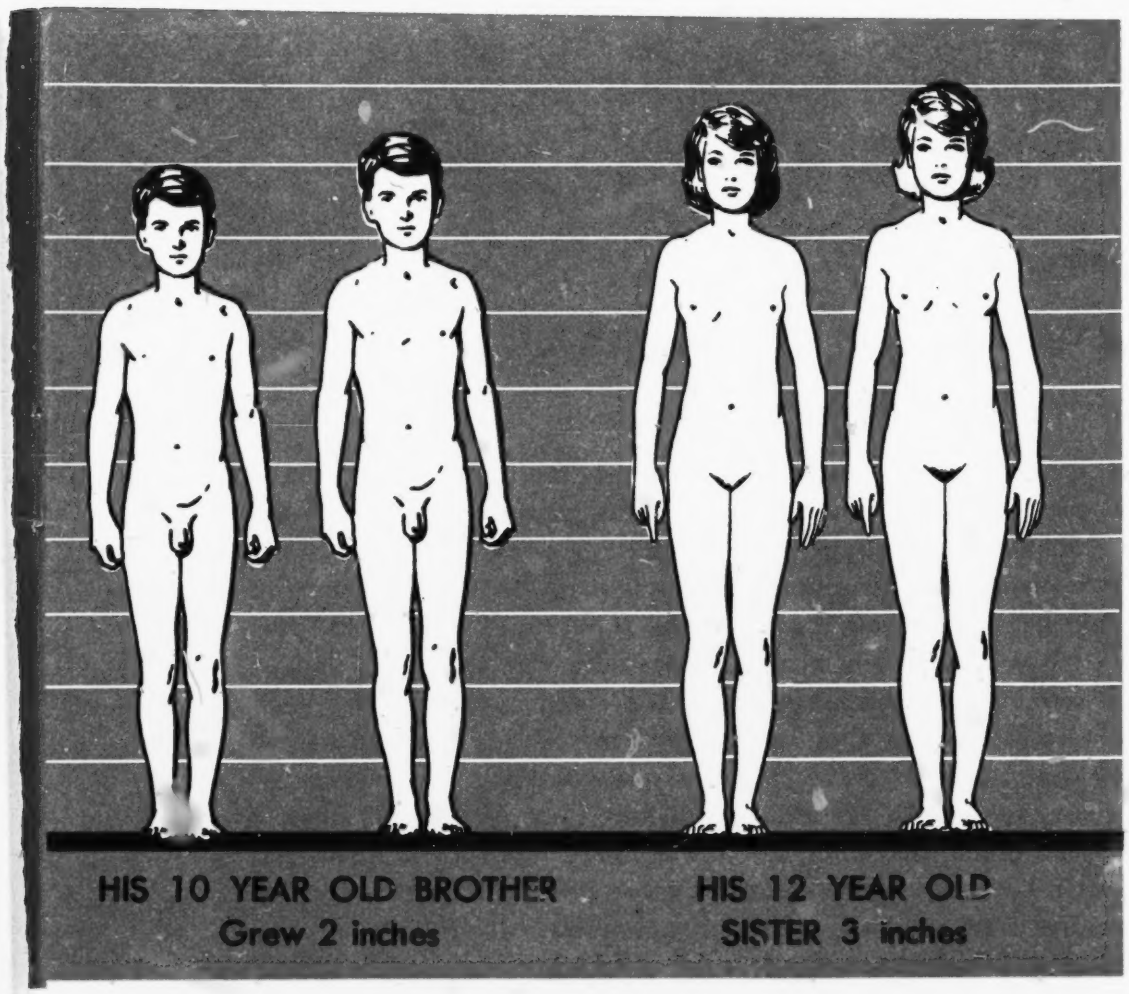
After you have been growing rather slowly for several years, something happens to make you grow faster again, but not so fast as when you were a baby. This happens to most girls when they are about ten or twelve years old, and to most boys when they are twelve or fourteen. It is not unusual, however, for the growing spurt to start a year or two earlier or later than those ages. It may last for two or three years. Perhaps you have some friends or schoolmates who have already begun to spurt ahead.

Boys of ten or twelve often are surprised when some girls in their class at school seem to grow taller suddenly and to leave the boys behind. In a couple of years, the boys will begin to catch up, and in the end, most boys are taller than most girls.

Growth in height slows down again after this period of rapid growing, and usually stops when young people are in their late teens or early twenties.

As you see, there are four stages in the way you grow taller. Fast, slow; fast, slow; then stop! You could almost make it rhyme, like this,

Fast and slow, fast and slow
That's the way the youngsters grow!



You can probably make a better rhyme if you want to try it.

There was one time in your life when you grew faster than you did in the year after you were born. That was *before* you were born. Then, for nine months, you were living inside your mother's body. You started as someone very small, indeed, and grew to be a baby who weighed six or seven or more pounds at birth. Probably your mother can tell you exactly how much you weighed, and how long you were when you were born.

How you became alive, the way you grew before you were born, how you were born, and the way you are growing now, are all parts of your own story. This story will explain these things, and many other questions about yourself that may have seemed mysterious to you. Why do some babies turn out to be boys, and others to be girls? Why are some people very tall, others short, and still others medium? Is there any way of telling how many inches taller you will be when you reach your full height? And have you wondered why you stop growing? Why don't you keep on, until you're as tall as a tree? The story of how you started life and how you grow helps to answer these questions and many others.

But there is still a great deal that no one knows.

Chapter 2

HOW YOUR LIFE BEGAN

It is hard to know just where to begin the story of your life. Have you ever read a book about some famous persons, such as George Washington or Abraham Lincoln, that began by telling about the hero's parents and his grandparents? Perhaps the story of your life should begin with your parents, too. If you talk with them, they may tell you that their story was something like this.

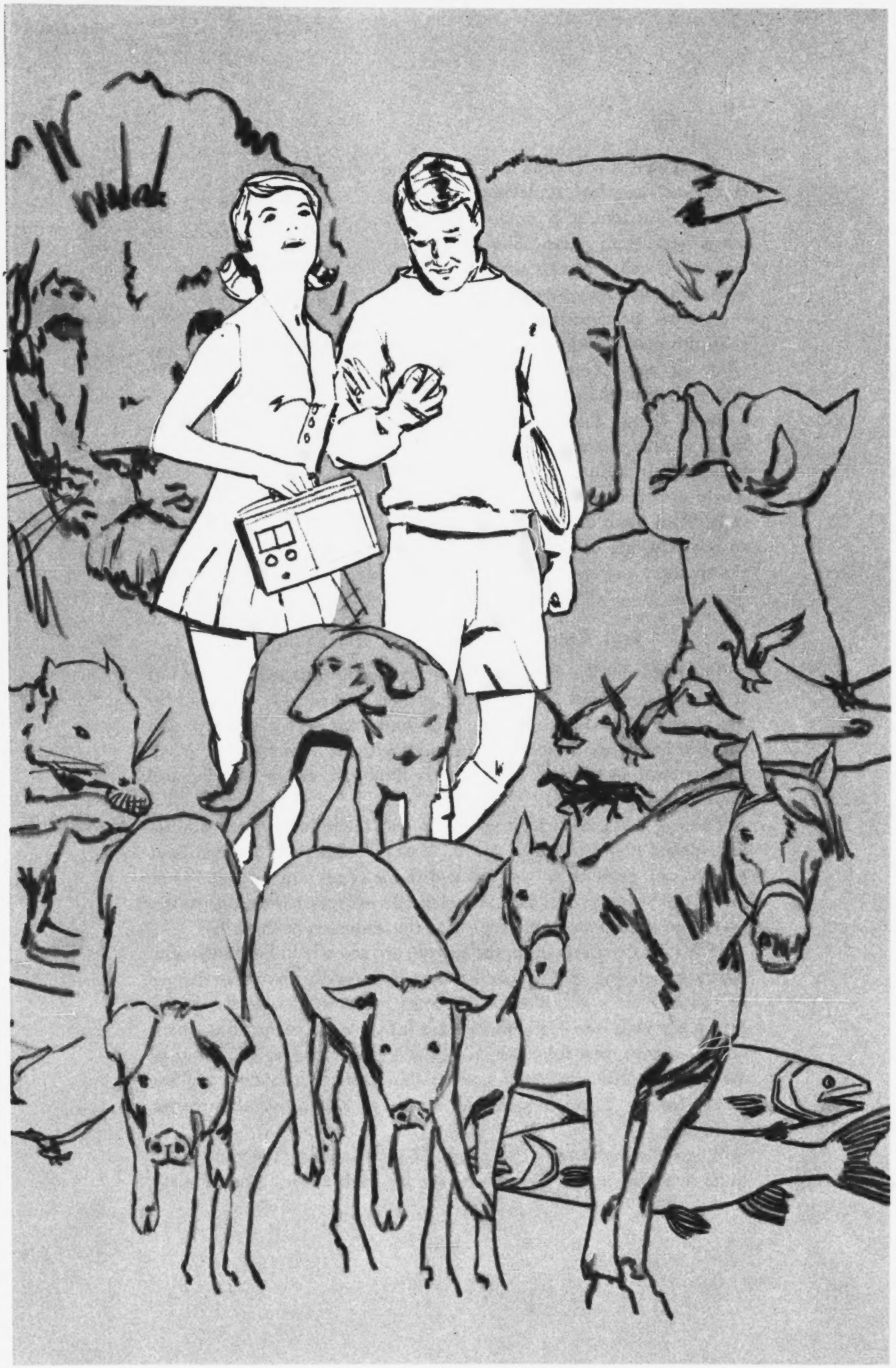
Before you were born, your parents decided that they loved each other so much that they wanted to live together always, and so they were married. Have they ever told you about their wedding? It may have been a big affair in a church, or a small one in your mother's home, but wherever it was, there was something special about it because your father and mother loved each other. On the day they were married, your father may have been very nervous, like most bridegrooms, for fear he would lose the wedding ring. And of course your mother was very beautiful, for all brides are beautiful with happiness on their wedding day.

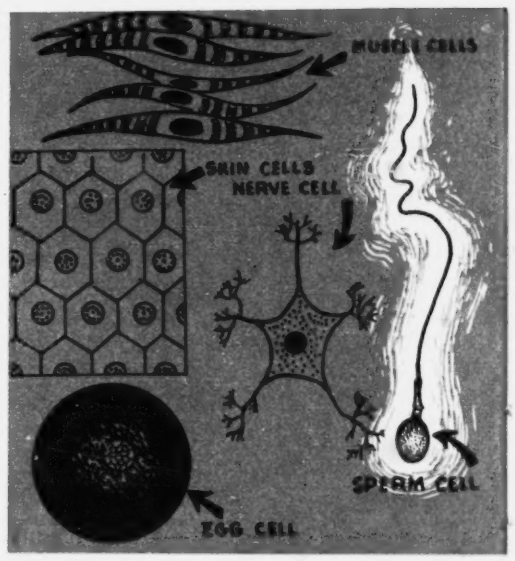
After they were married, they helped each other to make a home. Your father worked to earn money to buy what was needed, and your mother made the house comfortable and home-like. Perhaps she had a job, too, if your father was in the army for a few years, or if she needed to work for some other reason. Your father and mother each helped to make the home, by doing the things that each knew how to do. After awhile, because your father and mother loved each other very much, and wanted to have children, the time came when you were born.

This is one way to start the story of your life. But how did you start growing? How did you become alive?

Living Things Make New Life

Of course the world is full of living things. They may seem common to you, and yet there is a mystery about them. The mystery is this: no one knows how to give life to something that is not living. Whenever a new living thing comes into the world, it must start from something that already has life. Your life started from life that your father and mother handed on to you.





If you have a chance to look at a living thing, such as a leaf, under a microscope, you will see that it is made of a great many very small parts. The small parts are called cells. Most cells have a thin wall that surrounds some material that is remarkable because it has life. In some cells, this material looks like the uncooked white of egg. You can see the living material through a microscope.

Some living things, like germs, are made of only one cell, but it takes *billions* of cells to make someone your size. In a human being there are many different kinds of cells. These are muscle cells, skin cells, bone cells, nerve cells and blood cells. And there are two very special kinds of cells that are needed to start the life of a new human being. These are egg cells from the mother, and sperm cells from the father.

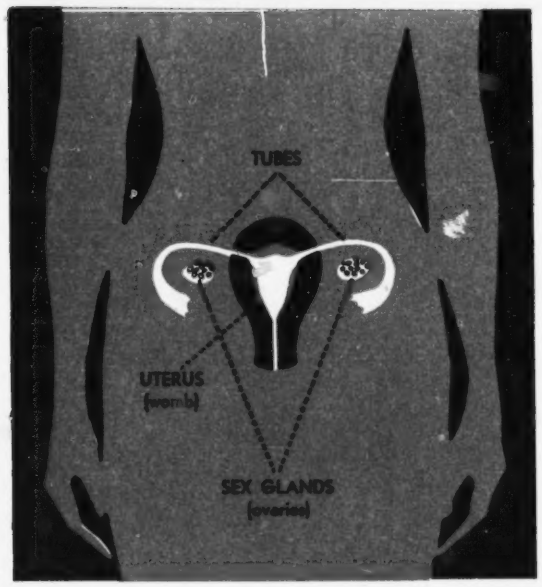
Egg Cells Give Life from the Mother

The egg cells of a human mother are bigger than many cells, but it would take about 200 of them, placed side by side, to reach as far as one inch. If the light is good and your eyes are sharp, you can just barely see something this small without a microscope. Each egg is round, like a ball; it has a very thin wall, and inside the wall there is living material.

The egg cell from which you grew was made inside your mother in a special place called an *ovary* (ō′ vå rē). Girls and women have two ovaries, each about the size and shape of an almond nut. They are in the lower part of the *abdomen* (ăb dō′ mĕn). Doctors, nurses and some other people often speak of the abdomen as the belly.

When a baby girl is born, the ovaries are already in her body, with partly grown egg cells in each ovary. Most girls are about twelve or thirteen years old when the ovaries begin to change the partly grown egg cells into egg cells that are fully grown. After that, about once a month, one fully grown egg cell leaves one or the other of the ovaries, until a woman reaches middle age—usually sometime in her forties. From then on, no more egg cells leave the ovaries, as a rule.

When the egg leaves the ovary, it goes into a tube that opens quite near the ovary. There is a tube for each ovary. Then the egg



Based on a diagram from *The Gift of Life,* published by Health Education Service, Albany, N. Y.

cells travel through the tube to another place in the body called the *uterus* (ū′tēr ŭs), or *womb* (wo͞om). The important thing about the uterus is that it is the place in a mother's body where a baby grows. It is about the size and shape of a pear, and it is hollow. It is well below the stomach, in the abdomen, with an ovary on each side of it.

A narrow passage called the *vagina* (vȧ jī′ nȧ) connects the uterus with the outside of the body. The outside opening of the vagina is between the legs where it is protected by folds of skin and flesh. The body's opening for passing urine is in front of it, and the opening for bowel movements is some distance in back of it.

Girls and women have ovaries, a uterus, and a vagina. Boys and men do not have these parts of the body.

Most of the eggs that leave the ovaries travel through one of the tubes, through the uterus, into the vagina, and out of the body. But not all of them!

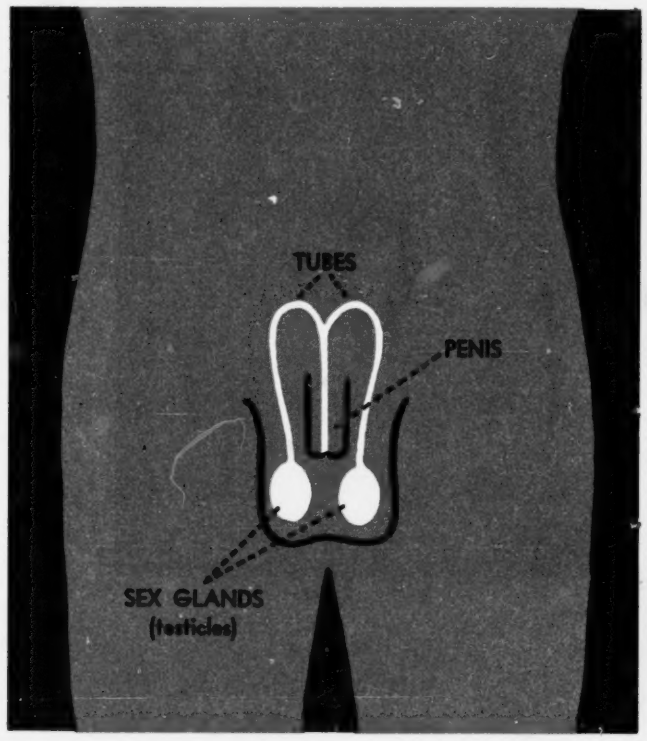
Sperm Cells Give Life from the Father

Sometimes an egg cell stays in the uterus and starts growing into a baby. This happens when a sperm cell from the father joins the egg cell made by the mother.

When a sperm cell unites with an egg cell, the egg and the sperm merge together to make one new cell. The new cell is than called a *fertilized* (fûr′ tī līzd) *egg cell,* and it will grow into a baby. Only a fertilized egg cell can do this. One of Nature's great mysteries is the marvelous growth of this once small cell into a human being.

Sperm cells grow in two parts of the father's body called *testicles* (tĕs′ tĭ kls). The testicles are in a sac of skin called the *scrotum* (skrō′ tŭm) that hangs between the legs of boys and men, on the outside of the body.

The sperm cells are much smaller than the egg cells, and the testicles make millions of them. They are shaped something like little tadpoles, bigger at one end, and with a slender, wiggly tail. When the sperm cells leave the testicles, they go into the part of the body called the *penis* (pē′ nĭs). It is in front of the testicles, and is shaped something like a thumb. When a baby boy is born, he



Based on a diagram from *The Gift of Life,* published by Health Education Service, Albany, N. Y.

already has testicles and a penis. Girls and women do not have these parts of the body.

The testicles are not ready to make fully grown sperm cells until a boy is about thirteen or fourteen years old. Then his body also makes a whitish liquid which the sperm cells need so that they can swim in it from one place to another. The liquid and the sperm cells together are called *semen* (sē′ mĕn). Semen passes out of the body through the penis. This occurs when the penis is firm and erect instead of soft and limp, as it is most of the time. Urine also leaves the body through the penis, but sperm cells and urine cannot pass through it at the same time.

How the Sperm Cell Finds the Egg Cell

You may wonder how the sperm cell found its way to the egg cell from which you grew. The answer is part of the story of the married love of your mother and father. Doubtless you can name many ways in which they show their love for each other—in small courtesies, or great sacrifices, or hard work day after day, or in special gifts at Christmas, birthdays, or wedding anniversaries. They also show their love in kisses or caresses, for when people love each other enough to marry, there is a deep attraction between them. In some homes, parents show their affection openly; in others, only privately.

At times, love that a father and mother feel for each other makes them want to be alone, and to be very close in an act called mating, or sexual intercourse. When they lie close together in a loving embrace, the father's penis becomes erect and can fit into the mother's vagina. Then, if some sperm cells leave the father's penis, they can swim along the vagina in the semen, and can enter the uterus, and swim into the tubes.

If there is an egg cell in one of the tubes in the mother's body, a sperm cell can unite with it to make a fertilized egg cell. Only one

sperm cell can unite with the egg. If an egg is fertilized, it moves along into the uterus, where it stays while it is growing into a baby. However, a sperm cell does not find an egg cell every time that sperm cells enter a mother's vagina.

The ovaries, uterus and vagina of girls and women are called sex organs. So are the testicles and the penis of boys and men. These organs make the chief differences between the sexes. Girls and women are of the female sex, and boys and men are of the male sex. Sometimes people call the sex organs "reproductive organs" because they are the parts of the body that "reproduce," by passing life on to make new human beings.*

*If parts of this chapter are hard for you to read, you might ask your mother or father to read it with you.

The love that brings mothers and fathers together when they marry and have children is one of the finest things in the world. Because of this love, they do everything they can to take care of you and your brothers and sisters, and to make a happy home for all of you.

Where Did Life First Come From?

You know now that your own life began because both your mother and father gave you life. This life was in the egg cell of your mother and the sperm cell of your father. When these cells joined, a new life began that grew into the special person that is you.

Your parents became alive because your grandparents handed life on to *them,* and your grandparents became alive because life was passed on to them by *their* parents. And so on, and on, and on, and on, farther back than you can imagine.

Scientists do not know just when life came into the world, nor how life started, nor even what it is. For centuries, wise people have believed that in the beginning, God gave life to the world. Probably you and your father and mother also believe that this is the best way to explain how life began.

Life is the most remarkable thing in the world, and each one of us has the wonderful experience of being alive.

Chapter 3

GROWING FROM AN EGG INTO A BABY

When a mother and father find out that a baby has started to grow in the mother's body, naturally the whole family is interested in taking good care of the mother, and in getting ready for the baby. The baby will need about nine months of growing before he is ready to be born. People say that a mother is *pregnant* (prĕg′ nănt) while a baby is in her body. During that time, a doctor can help a mother by telling her what she should eat, and by looking after her so that she keeps well.

Nowadays doctors know how to take care of mothers so that most of them feel well nearly all of the time that the baby is growing

inside of them. Most mothers who work outside the home—as teachers, librarians, or clerks in stores, for example, even feel well enough to keep on working for a time when they are pregnant.

For the last few months before the baby is born, many mothers wear attractive clothes that are made to fit the changing shape of their bodies. Such dresses are called "maternity dresses," because *maternity* (mȧ tûr′ nĭ tē) means motherhood. You may have noticed women wearing such dresses.

The mother and other members of the family usually enjoy getting the baby's clothes ready before he is born. Some fathers know how to use tools, and can make a bassinet, or special crib, where the baby can be safe and warm. In other families, the mother and father go together to a store to buy a crib, or a baby carriage, or other furniture for the baby. Sometimes older brothers and sisters can help to paint or repair the old baby furniture or toys that they used when they were babies. It is fun for the family to do these things together so that the baby will have what he needs.

How the Baby Grows in the Uterus

While the mother and the rest of the family are busy getting ready for the baby, he keeps on growing, safe in his mother's body. At first, of course, he does not look at all like a baby. You remember that a baby begins as a fertilized egg cell. To start with, it is just one living cell. Soon the fertilized egg cell divides into two cells. Each of those two cells divides, so there are four cells. Each cell divides again, making eight. The cells keep on dividing, and as new cells are made, the baby grows.

Before the cells have divided many times, this mass of cells moves from the tube where the sperm cell united with the egg, and goes into the uterus. By now, the lining of the uterus contains an extra supply of blood, which will bring the food that a growing baby will need. When the fertilized egg reaches the uterus, it attaches itself to the lining of the uterus, and grows there until the baby is ready to be born.

When a fertilized egg first divides into two cells, each cell is like the other cell. After the cells have divided a good many times, they then begin to form the different parts of the baby's body, such as the lungs, stomach, bones, muscles, and skin.

At the end of two months, the baby begins to look like a baby, although a rather odd one. He is about an inch long, with a head about as big as his body, and with very tiny arms and legs. He has

eyes, ears, nose and mouth. By the time he has been growing four months, he is about four inches long. Soon after this, he can move his arms and legs. When the mother feels these movements, she is happy that the baby is growing as he should.

At six months, the unborn baby looks more like he will after he is born, but he is only about a foot long, and weighs only about one and a quarter pounds. He is not yet ready to live outside his mother, because the organs inside his body are not finished. His skin may be wrinkled, because he doesn't have the padding of fat that will make him plump later on. In the next three months, he'll grow fatter.

By the time the baby has been growing for nine months, he will be about twenty inches long, and will weigh about six or seven pounds, more or less. All the parts of his body will have grown enough so that he is ready to be born, and to live outside his mother. Some babies, who are born a few weeks early, but are far enough along to breathe and take food, live to be strong and healthy children if they have special care. Such babies are often kept in a special kind of incubator for awhile, to keep them warm and comfortable.

You may wonder how there can possibly be room in a mother's body for a seven-pound baby. If you could see an unborn baby, you would find that he is expertly packaged, with arms and legs folded close to his body, to fit into as small a space as possible.

How the Mother's Body Helps the Baby to Grow

During the nine months in his mother's body, the baby is well protected. Soon after the fertilized egg attached itself to the uterus, a sac grew around it. The sac was filled with a fluid, and the baby floated in the fluid. This protected him from being jolted or bumped in a way that would harm him.

The baby can live in this fluid while he is in his mother's body, because he does not need to eat through his mouth, nor breathe through his nose during those nine

months. There is a special arrangement by which his mother's blood brings him food that he needs, and the part of the air he must have in order to live. This part of the air is called *oxygen* (ŏk′ sĭ jĕn).

The baby is attached to the inside of his mother's uterus by a cord that has some of the baby's blood vessels in it. The cord is attached to the baby's body at the place where his *navel* (nā′ vĕl) will be. At the place where the cord is fastened to the mother's uterus, there is a special network of blood vessels, where the mother's blood vessels and the baby's are close together. This network is called the *placenta* (plå sĕn′ tå).

At the placenta, food elements filter from the mother's blood vessels into the baby's blood vessels. The baby's blood then carries the food and oxygen to all parts of his body for the cells to use in making new cells and doing their work. When the cells have used the food, there is some waste left over. It passes from the baby's blood through the placenta into the mother's blood, and her body gets rid of it.

There is a saying that a mother who is expecting a baby is "eating for two." You can see that she is also breathing for two, and getting rid of waste material for two—herself and the baby.

The mother's body also makes other arrangements specially for the baby. Her breasts get ready to provide milk, so that when the baby is born, she can supply at least part of his food. For another thing, the uterus stretches, and stretches, while the baby is growing in it. It stretches as fast as the baby grows, so that it is never too small. In fact, it becomes big enough even when two or more babies are growing in it. In that case, each baby is attached to the uterus by his own cord.

The whole lower part of the mother's body grows bigger, especially in the last few months before the baby is born. It is during these months that the mother may like to wear pretty maternity dresses.

It is no wonder that everyone in the family thinks that this is a very important time in the mother's life, and that the other members of the family like to be especially thoughtful for her comfort.

Chapter 4

THE BABY IS BORN

Nine months seems a long time to wait, but at last the baby is ready to be born. Soon his family will know whether the baby is a boy or a girl! Whichever it is, the new member of the family will be welcome.

The Mother Helps the Baby to be Born

When the baby's birth is near, something interesting happens. The mother's uterus has been stretching for a long time, but finally it stops getting bigger. Instead, the muscles of the uterus begin to push the baby out, and into the vagina. In this way, the mother's body helps the baby to be born. In getting ready for the birth, some other parts of the mother's body stretch so that there will be room for the baby to come out.

When the muscles of the uterus start pushing the baby out, the mother feels some cramps, something like the pains of a stomach ache. This is called "labor," because it really is labor, or work, for the mother to help the baby to be born. When the cramps begin, the mother knows that it is about time to go to the hospital to have the baby, or to ask the doctor to come to her house. If she is going

to the hospital, she probably has packed a suitcase ahead of time, with everything she will need.

By the time the baby is ready to be born, he is usually head down in the uterus, so his head is likely to be the first part to be pushed into the mother's vagina. The vagina stretches quite a lot so that it is big enough for the baby to pass through. The sac of fluid around the baby usually bursts after the mother's labor begins. Before long, the baby comes out into the world, and not long afterward, the placenta comes out too.

Sometimes it takes only a few moments, but sometimes it takes many hours for a baby to be born. The doctor gives the mother some medicine to make her comfortable if the labor is hard enough so that she needs it. When the mother holds the baby in her arms, she is so happy to see the little boy or girl that she forgets all about the pain.

Just about the first thing the baby does when he comes out into the world is to cry! For once, people are glad to hear a baby cry, because it shows that he has begun to breathe with his own lungs.

When the baby is born, the cord is about two feet long. The doctor cuts off the cord near the baby's body, and bandages the cut place. In a short time, the bit of cord that is left will dry up. The

place where it was once attached to the baby's body is called the navel, or belly button. It does not hurt the baby or the mother when the cord is cut, because there are no nerves in it.

Before long, the mother's uterus and other parts of her body go back to about the same size as before she had the baby. Some mothers are able to feed the baby with milk from their own breasts for a number of months. After the mother has stopped nursing the baby, her breasts will stop making milk.

A great many mothers and fathers prefer to have the baby born in a hospital. Doctors and nurses have everything there they need to take the best care of a mother and her newly-born child. Nowadays, doctors know a great deal about how to take good care of pregnant mothers, and how to help the baby to be born.

It is a happy day when the mother and baby come home from the hospital. Of course, the mother needs to rest more than usual after she comes home, and the new baby needs special care, but the doctor and the nurse will tell the family how to look after both of them.

When Animals Have Babies

Do you live on a farm, where there are many farm animals, or do you have a pet, such as a dog or a cat? If so, you probably know that puppies grow inside the mother dog, kittens inside the mother cat, the baby calf inside the cow, and so on. When a mother animal looks larger than she usually does, you can guess that baby animals are growing inside her.

Horses, cows, cats, dogs, and many other animals are like human beings in some ways when it comes to having babies. The father animal places the sperm cells inside the body of the mother, the fertilized egg cell grows into a baby inside the mother's uterus, and the baby comes out through the vagina at birth. The mother animal also supplies milk for the baby after it is born, and many mother animals look after their young and protect them from danger.

Animal parents are different from human parents in some important ways. You may have wondered why many animals, such as cats and dogs, so often have several babies at once. Human mothers usually have only one baby at a time, because there is usually only one egg cell at a time in the tubes, although now and then there are more. But in many female animals, there are likely to be several egg cells in the tubes at once, so that more than one egg is fertilized at the same time. Then there are several kittens, or puppies, for example, in one litter.

There are other differences, too. Animals are not a very good example of how mating goes on in human beings. Animal mating goes on at certain seasons of the year when the male and female animals are attracted to each other. Then you may see a male dog in a half-standing position on top of a female dog when they are mating. Depending on the kind of animal, the male animal places his penis inside the female in different ways.

The animals do not seem to choose their mates because they love or like them. For example, a male cat may mate with any female cat he sees during the mating season, but the next time he feels like mating, he may find a different mate. He does not stay with the female cat after they have mated to help her look after the kittens. In fact, he would not know his own kittens if he saw them. Even the mother cat does not look after them for more than a few weeks. The father bird is a much better father than the father cat, as a rule.

It's a different story when human beings make a home. Then father, mother, and children live together for years, loving each other and helping each other, through trouble as well as happiness.

Helping at Home When the New Baby Comes

If you have brothers or sisters who are not yet old enough to go to school, you may notice that it is rather hard for them to realize what an interesting thing it is to have a new baby brother or sister. If one comes into your family, a little tot three or four years old may not understand why the mother has to spend so much time taking care of the new baby, and he may feel that he is being left out. Parents usually know this, and try to show special interest in the young children of their family when a new baby is coming.

Of course, older brothers and sisters of your age know that parents keep on loving all their children, and do not love any of them less when a new baby arrives. If there is a new baby in your home, your parents may need your help in taking care of younger brothers and sisters, and in helping them to have a good time when your mother is busy with the baby.

Keeping a Record of Births

In almost all the states of this country, the doctor is supposed to send a record of the baby's birth to the department of health. A birth certificate is issued which states the date and place of the

baby's birth. It also states whether the baby is a boy or girl and gives his name and some other information. Your birth certificate is a very valuable paper. It will help you when you get your first job, or if you want to get a passport to travel in foreign countries, for example.

Of course, in your own family you do not need a record to help you remember such an important date as your own birthday. For weeks, you look forward to some special celebration. And naturally you know how old you will be too, on that date. But there was once a little boy five years old who was confused. During his birthday party, he suddenly remembered that his mother had told him that he grew in a special place in her body before he was born. "Mummy," he asked, "is my birthday the day I got into you, or the day I got out of you?"

Surely you know the answer. Or do you? In China, it is the custom to say that a baby is one year old on the day that he is born, because he has been growing for so many months in his mother's body. In our way of counting birthdays, we do not count those months at all. Which way do you think is better?

Chapter 5

BOY OR GIRL?

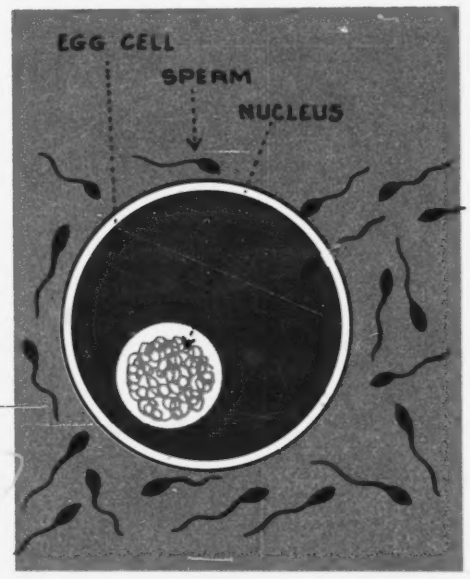
For months before the baby is born, members of the family amuse themselves by guessing whether it will be a boy or a girl. There was once a family where a little four-year-old girl was told that her mother was going to have a baby. Since there was already a brother in the family, this little girl decided that she wanted to have a sister. She put aside some of her own dresses and toys for the new sister. When her parents tried to explain that the new baby might be a boy, she was very angry, and demanded a girl!

You are old enough to understand that fathers and mothers cannot decide ahead of time that they will have a boy baby, or a girl baby. They just take what comes! But perhaps you have often wondered why some babies turn out to be boys, and others to be girls.

After the new baby arrives, every visitor seems to feel that he must decide whether the baby looks more like his father or his mother. "He has his father's eyes, but his nose is just like his mother's," someone may say. In fact, visitors often make such remarks about growing boys and girls of any age. Perhaps you wish they wouldn't! But you yourself may have wondered what makes a child look like his father, or mother, or some other member of the family.

There are two kinds of sperm cells. One kind will produce a baby girl if it fertilizes an egg; the other kind will produce a baby boy. There are equal numbers of each kind. So you see, there is a 50-50 chance that the baby will be a boy or a girl. It depends on which kind of sperm has fertilized the egg.

The fertilized egg from which you grew was made when your father's sperm cell united with your mother's egg cell. No wonder, then, that you look like your mother, or like your father, or some other member of your family. Through the sperm cell and the egg cell, family traits such as the color of the eyes, or hair, or the shape of the nose, ears, or other features are passed along from parents to their children. Tall parents, for example, are likely to have tall children, and short parents often have



short children, though not always, in either case. The family traits that are passed on from parents to child are said to be the child's *heredity* (hĕ rĕd′ ĭ tē). Heredity influences mental ability as well as body appearance.

Sometimes children look more like their grandparents, or an aunt or an uncle, than their parents. And sometimes they don't look like anyone in the family! This is not surprising, because the combination of traits you can inherit is so great. Remember that half of your heredity is a mixture of traits from your father's side of the family, and half from your mother's side. These mixtures can be combined in all sorts of ways in your heredity. Your parents got their family traits from your grandparents. Your grandparents, in turn, inherited their family traits from their parents. When you think how many gandparents, great-grandparents, and great-great-grandparents you have, you can see why the family traits that were passed on to you may be very different from those of your brothers or sisters.

In one family where most of the children were short, the youngest boy was very tall. He was often teased about this difference by people who did not stop to think that members of one family are often quite different from each other and that some children grow faster than others.

The fact is that there are so many possible combinations of traits that no two babies are exactly alike, with one exception. Sometimes one fertilized egg grows into two or more babies, instead of into one baby. If there are two babies, they are called "identical twins," or "like twins," because they came from the same fertilized egg. They are always of the same sex. They look so much alike that it is almost impossible to tell them apart.

Occasionally there are two egg cells in the tubes at the same time, and a different sperm cell unites with each one. Then two babies grow in the uterus at once but, in this case, each one has a different heredity. These are unlike twins. They do not look any more alike than most brothers and sisters do. One can be a girl, and one a boy, or both can be boys, or both girls.

One thing about your heredity is so plain that perhaps you overlook it. Human egg cells and sperm cells always make human beings. Human parents have human babies. A mother and father dog have puppies, a mother and father cat have kittens, and so on. The special nature of the parents is passed on to the children, and so the children must be the same kind of living being as the parents.

Chapter 6

GROWING FROM A BABY TO A SCHOOL CHILD

What is the very earliest thing that you can remember when you look back over your whole life? One woman who is old enough to be a grandmother remembers sitting on a wide window-sill and looking down at the street through yellow glasses when she was three and a half years old. Perhaps this was the first time that she looked through colored glasses.

Probably you cannot remember very much that happened to you before you were three years old. Nearly everyone forgets the earliest chapters in the story of his life as a young baby. Your parents may have told you about things that you did, or things that happened to you, when you were too young to remember them. Some of the stories are laughable, and some may sound silly to you! Just the same, it is fun to have your parents remember these little things about you. They remember them because they are interested in everything you do.

If you look at snapshots of yourself as a baby, sometimes you can scarcely believe that you are the same person. Anyone can see that there has been a change in your size, for you are much taller and heavier, but you have also grown up in other interesting ways that we will talk about in this chapter.

In all these ways, your parents have helped you to grow up. For example, they have given you the food your body needs for growth, and a home where you can play and work, and sleep and rest. They have helped you to learn a great many of the things that boys and girls need to learn as they grow up. They have sent you to school. If you tried to make a list of all the ways in which they have helped you to grow up, it would be a long one. But your parents haven't done it all. You yourself have to do a great deal of your own growing up.

Growing Taller

Have you ever wondered what has been happening inside you to make you grow tall? Scientists know a good deal about this part of the story of growth, but not everything. Of course you can guess that you haven't added all those inches to your height since you were a baby, just by stretching your neck like a giraffe or a goose! Your body cells have been at work all the time, dividing and making new cells, and doing all the things that are needed for the growth of your body.

You grow taller when the long bones in your legs grow longer, and the bones of your back, neck, and head grow bigger. Both before and after you are born, your bones grow in two ways. They get bigger and they become harder.

The bones of little babies are rather soft because they are largely *cartilage* (kär′ tĭ lĭj). Gristle is the common name for cartilage. You know that the gristle of meat is tough and chewy, but not hard. When a baby is ready to be born, some of his bones have become hard in some places. There are still soft parts in the bones of his head which make it easier for his head to pass through his mother's vagina.

After the baby is born, it takes a long time for all the cartilage to change into strong, hard bone. You will be about old enough to go to college, or to take a job, before all the changes in your own bones are completed.

The bones of your legs, feet, arms, hands, and ribs are called "long bones" because of their shape. The drumstick of a chicken

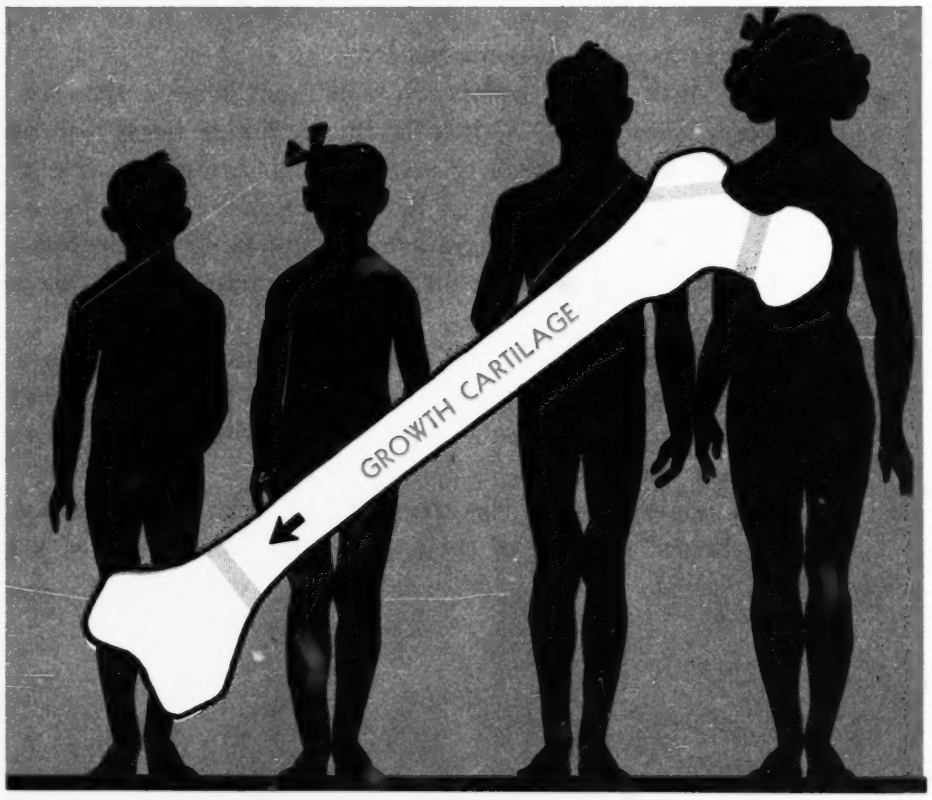
has the shape of a long bone, with a long, slim part in the middle that is called the shaft, and a wider part at the end that is called the head. There is a layer of cartilage between the shaft and the head. Growth in length takes place in this layer of cartilage.

Gradually the cartilage in the shaft turns into hard bone, and some hard places form in the head. At the same time that more cartilage turns into hard bone, new cartilage grows in the cartilage layer at the end of the shaft. This goes on for years, and during all this time, the bone can keep on growing in length. At the same time that the bone grows longer, it grows thicker by adding new bone around the outside.

Finally no more new cartilage is formed in the layer between the shaft and the head of the bone. After that, the shaft and the head grow firmly together, and the bone stops growing in length.

If experts looked at x-ray pictures of you and of some of your friends, they could see how much hard bone has been formed, and how much cartilage is left. They could tell from such pictures whether your bones were almost fully grown, or whether they would grow a great deal more. They would notice that in some of your friends, the bones have grown faster, and have more hard bone and less cartilage, than in other boys and girls of the same age. In this way, the experts could tell which of you would reach your full height stop growing sooner than otners, and which ones would keep on growing in height for a longer time.

Growth in height, and growth in the length of bones usually stops sometime between sixteen years and the early twenties. You may



be an "early grower," who reaches full height younger than some of your friends, or you may be an "average grower," or a "late grower." All these ways of growing are good. Girls usually reach full height a couple of years sooner than boys of the same age.

Your heredity has a good deal of influence on your height. If you are tall, medium, or short as a little tot, you are likely to be tall, medium, or short when you are an adult. During the years when boys and girls have their spurt of fast growing, you may feel rather mixed up about height. For example, a girl who is shorter than one of her girl friends may be an early grower who begins her growth spurt at a younger age than the taller girl. For a time she may catch up with the taller girl, but in the end the taller girl will spurt ahead once more.

Growing Stronger

Before you were old enough to go to kindergarten, your muscles were much smaller and weaker than they are now. In fact, when you were born, they made up only about one-fourth of your weight. Then, about the time when you were old enough to start going to school, they began to grow very much bigger and stronger. By the time you are about twelve years old, your muscles make up about one-half of your body weight.

Naturally you are much stronger now than when you were in kindergarten. Can you guess how much stronger the grip of your hand is, at eleven years, than it was when you were six years old? It is just about twice as strong!

Many other parts of your body could be mentioned in the story of how you grow. For example, your heart pumps blood through your body day and night. Every minute of your life, your blood carries food and oxygen to all your body cells, and takes waste material away from them. As the cells carry on this work and make new cells, your body grows. Your stomach, heart, lungs, head, skin, bones, muscles, nerves—all of them grow. Of course, when all of these parts of your body grow, you become larger and heavier, and more mature. Sometimes one part of your body grows faster than another, but even then, all the parts work well together, and belong together.

Growing and Learning Go Together

Have you ever tried to count how many things you have learned to know and to do since you were born? If you count every sepa-

rate thing you have learned, there must be thousands of them.

A new-born baby cannot sit up, or stand, or feed himself, or control his bowel movements, or keep from wetting himself. He cannot even reach for something to pick it up. After some months, he grabs at things with his whole hand, later he learns to pick things up between his thumb and his fingers.

You can probably think of dozens of things that a little baby learns by seeing, hearing, tasting, smelling, and touching. For example, he learns about his bottle of milk by seeing it and tasting it and getting used to the feeling of the warm liquid as he sucks it. Later, he gets used to the different feeling of solid food. By feeling and touching, he learns about the smoothness of silk, the roughness of wool, the sharp edge of his blocks, or the roundness of his ball, the softness of his pillow or the hardness of a spoon. He learns about his body, too, through his sense of touch.

By the time three or four years have passed, the little child can walk, run, jump a little, climb up and down stairs, ride a tricycle, talk a blue streak, and throw a ball in a funny sort of way. He can put most of his clothes on by himself, and when he goes to the bathroom to urinate or to have a bowel movement, he can get along without very much help if his clothes are easy to manage.

When he was a new-born baby, his nerves and his muscles were

not ready for him to do these things. Even if you hold a very young baby so that his feet touch the floor, he cannot walk, because his nerves and muscles are not grown-up enough for walking. But when the baby has grown up enough, then it is easy for him to learn to walk.

It seems that growing and learning go together. Boys and girls of your age can run, jump, swim, skate, and throw a ball, and play any number of games much better than first-graders, for example. You can easily do arithmetic problems and other kinds of school work that were too hard for you when you were in the first grade. This is because you have been growing up in mind and body, and you are able to learn new, and harder things, as you grow.

Your Use of Language Grows

If there is a baby in your home, you know how excited the older members of the family are when he says his first words. His first baby words are the beginning of his use of the language that he will need all his life. When he starts to school, he will learn to read and write words, as well as to speak them.

Some of the very useful words in our language are those that describe the body correctly, but many of these words are big ones that are hard to say. When a little child is just learning to talk, he may not be able to say "urinate," or "bowel movement," for example. Instead, he uses some easy, made-up words, such as "wee-wee," or "tinkle." Since these made-up toilet words are likely to be different in every family, a little child needs to know the correct words that everyone knows, when he goes to school. Of course you have known the correct words for a long time.

There are many ways of having fun with language. Little children like to invent words. Perhaps you like to make rhymes, or riddles, or you may think it is fun to learn new, hard words and to have your friends guess what they mean. (How many of them would know, for example, that *epidermis* (ĕp′ ĭ dûr′ mĭs) means the outer layer of the skin?)

Have you and your best friends ever invented a special language of your own, so that you can talk secretly? Many boys and girls do this, and sometimes they call it "pig-Latin." "An-cay ou-yay ead-ray is-thay?" is one kind of pig-Latin for "Can you read this?" Pig-Latin is fun for awhile, but in time its grows boring, and then it is more fun to learn a real foreign language.

Many boys, and some girls, seem to think it is amusing to use

rough, or vulgar language when they talk about their bodies, especially when they talk about sex. Possibly some of these boys and girls do not know the correct words, or perhaps they mistakenly think it is grown-up to use rough language, or that they show their independence in this way. Perhaps you have used such language yourself, but the time will come when you will be glad to know and to use the right words. It is part of growing up to learn how to speak of one's body correctly. You have already read many of the right words about sex in this story of yourself.

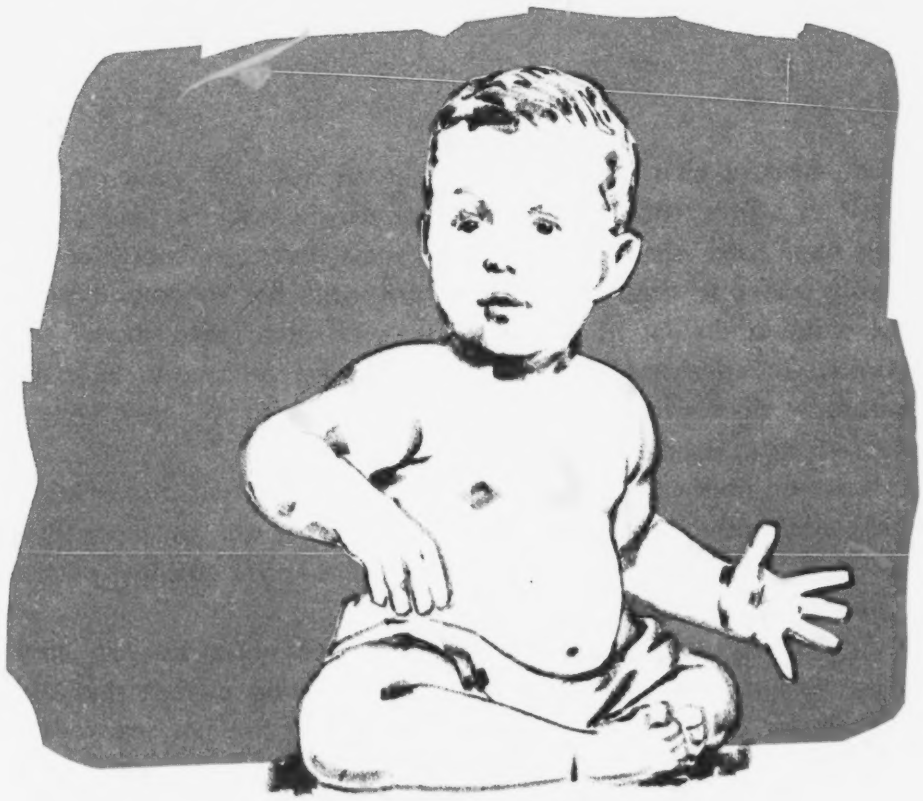
Your Feelings Change and Grow Up

If you stop to think about it, you will realize that there are many ways in which your feelings change as you grow up. For example, when you were a baby, you cried easily when you were hurt or hungry. Crying was your only way of calling someone to help you, and you could do very little to help yourself. By now, you have learned many ways of getting yourself out of trouble without crying for help.

When you were a baby, and wanted your bottle, or a toy, you wanted it *right away,* that very minute! Nowadays, you often plan ahead for something you want to do next week, or next month. You have learned to wait awhile, if necessary, for what you want.

Your feelings change towards your parents, too, and you learn to love them in a more grown-up way. When you were two or three years old, you may have been quite affectionate, and hugged and kissed your parents often, but you did not think of giving them birthday or Christmas presents. Perhaps you do not hug and kiss your parents as often now, especially when other people are present, but you like to save your money to buy Christmas gifts for them, or to make something for them, or surprise them in other nice ways. In fact, you probably love them even more than when you were small, but you show it differently.

When you were a small baby, you needed to be near your mother most of the time. Even when you started to kindergarten or first grade, you may have felt unhappy about being left in a strange place without her. Now that you have been in school for several years, you are used to being away from home for most of the morning and afternoon. You have made new friends, who may live quite far away from home. Perhaps you ride your bicycle, and go by yourself when you visit them. It may be that you belong to the Cub Scouts, or are planning to join the Campfire Girls, the Girl Scouts,



or the Boy Scouts. All of this means that you are spending more time away from your home than you did when you were a baby, but it does not mean that you love your family less. It just means that you are learning to be independent, to grow up, and to do the things that boys and girls do as they grow older.

Your feelings about your body also change as you grow up. For example, little babies do not think anything about being modest, or immodest. It makes no difference to them if people see them when they are undressed. As boys and girls grow older, however, they seem naturally to develop a sense of privacy about their bodies.

When the baby has grown into a little tot several years old, he has begun to learn that people wear clothes most of the time. He knows that he isn't supposed to undress when he is playing around outdoors, for example. Parents teach their little children not to undress in public just because it is our custom to wear clothes in most times and places, and not because a child should be ashamed of his body.

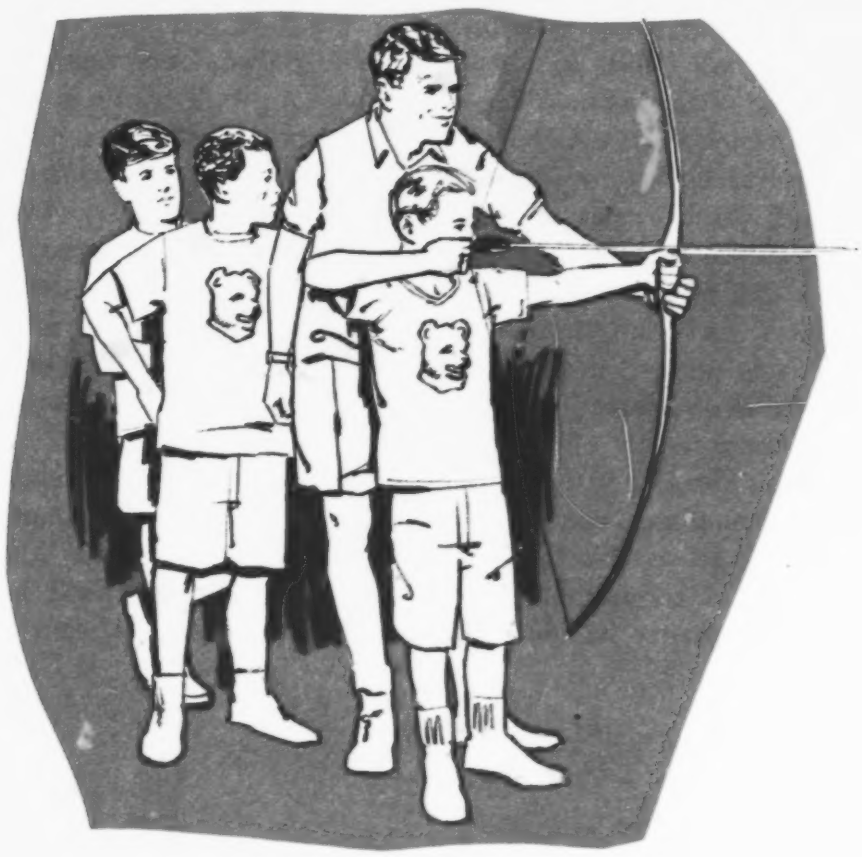
As you know, it is the custom to wear different kinds of clothes in different places, too. The clothes that you wear for swimming are not at all suitable for school, but when you are at the beach, you are quite comfortable in your swim suit. In some schools, boys swim and shower without suits, while in other schools, suits are

used. Several girls may share one shower room in some schools, while in others, each girl uses a separate shower. In most cases, girls wear suits when they swim. In some homes, members of the family prefer to dress and undress privately, but in other homes, the children do not mind undressing with other members of the family. In some homes, it is the custom for anyone to lock the bathroom door when he uses the bathroom, but in other homes, the bathroom door is never locked.

Boys will notice that some boys have been *circumcised* (sûr′ kŭm-sīzd) while others have not. Many parents, but not all, have their boy babies circumcised. This means that the doctor cuts away some loose skin at the end of the penis.

As you see, there are many different customs about modesty, and about keeping one's body covered, and wearing clothes that are suitable for different places. These differences are not really very important. It is not surprising that boys and girls in one family, or one school, or one part of the country, may have different feelings from some other boys and girls about these things. You yourself will probably change some of your customs at times.

In homes where there is only one child, or where it is the custom for everyone to dress and undress very privately, a boy or a girl may not have a chance to learn what the bodies of other people look



like. As you know from reading this book, boys and girls are made differently, and the pictures on pages 39, 42 show these differences.

If you have friends who do not know the facts in this book, they may have some very peculiar ideas. They may believe such untrue things as that storks bring babies or that babies are born through the mother's navel, or other things that are not true. To be sure that your own ideas are correct, you may want to read this book again, and to talk about it with your mother or father, some other older person in your family, or someone else whom you trust, perhaps in your church or at school. Some other good books that you might like to read are listed on page 43.

Your Friendships Will Change

As children and young people grow up, the feelings of boys towards girls, and of girls towards boys, go through several changes, as a rule.

It makes no difference to babies whether they play with boy babies or girl babies. In nursery school and kindergarten, little children play together without caring much whether their playmates are boys or girls.

But by now, if you're a boy, you may have decided that you don't like to play with girls. You'd rather be with your own gang of boys. Or, if you're a girl, perhaps you don't enjoy playing with boys. You have more fun when you're with your girl friends. All right, there's nothing wrong with any of that!

On the other hand, if you know a boy your age who has some friends who are girls, that's all right. And if a girl plays with boys, that's all right too. It isn't necessary for every boy to be the same as every other boy, and to feel just the same about girls as the other boys do. And there's no reason for every girl to be the same as every other girl, either.

In another few years, perhaps in just another year or two, you'll probably discover, if you're a girl, that boys are interesting after all! And if you're a boy, you'll find out that girls aren't so bad either!

Chapter 7

WHAT COMES NEXT?

In a couple of years or so, perhaps sooner, you will be ready for junior high school. Then comes high school, and after that, college, the army, a job, getting married, and making your own home and having children. Before you know it, you'll be one of the old folks who tells stories about "when I was your age!"

Before you become a man or a woman, you will go through several years when many changes take place in your body, in your feelings, and in the things you enjoy doing, and in your ability to make wise and sensible decisions. This period of several years is called *adolescence* (ad′ ŏ lĕs′ ĕns). People usually speak of the teen-age years as adolescence.

If you have brothers and sister in their teens, you know that teen-agers sometimes feel themselves to be more grown up than your parents think they are. Perhaps both of them are right! Teen-agers are often more grown up than their parents realize, but may not be as grown up as they themselves think they are! Life does not always run smoothly while boys and girls are learning to be men and women, but just the same, adolescence is a very interesting time when young people enjoy many new experiences.

How Your Body Changes in Adolescence

Earlier in this story about you, in the first chapter, we talked about a spurt of fast growth in height that happens to most girls when they are ten or twelve, and to most boys when they are twelve or fourteen. Before this spurt of growing is over, several small parts of the body called *glands* gradually bring about other bodily changes. These glands make certain kinds of liquids called *hormones* (hôr′ mōns) that they send into the blood. There are a number of such glands in the body, but we will only talk about two or three that seem to govern body changes in adolescence.

One of these glands, about as big as a large pea or a small marble, is underneath your brain, safe inside your skull. It is called the *pituitary* (pĭ tū′ ĭ tĕr ē) gland. It is hard to believe that such a small thing can be so important. This gland makes several different

hormones. One of them affects the way bones grow, and governs height. You may have seen pictures of giants, and dwarfs, with the circus. Probably the giants had too much of this hormone, and the dwarfs too little. Fortunately nearly all children seem to have the right amount.

Another hormone of the pituitary gland makes a child's sex glands mature at a certain age. The sex glands are the ovaries and the testicles. This hormone affects both boys and girls, but the results show in different ways.

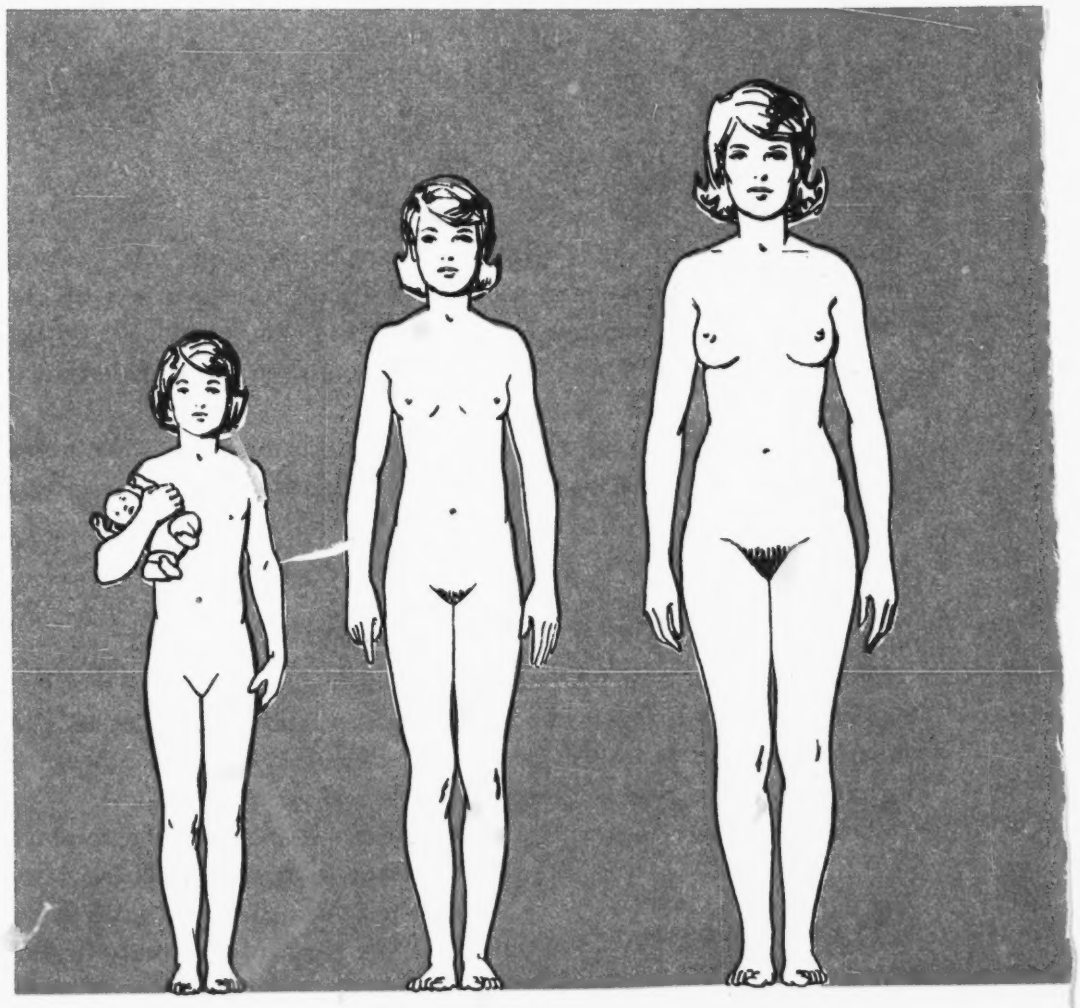
How Girls Change in Adolescence

You remember that when a baby girl is born, her ovaries and her egg cells are not full grown. When girls are about eleven or so, the hormone of the pituitary gland that affects sex glands seems to signal the ovaries, and they begin to grow and mature.

And then what happens? As the ovaries mature, they also start to make hormones! These hormones affect the girl's growth so that the form of her body begins to change. She is likely to gain weight rapidly. Her hips and her breasts become fuller, and the uterus, tubes, and vagina grow larger. Hair grows on the lower part of her abdomen and under her arms. A year or two may pass while these changes are taking place. Then, when the girl is about thirteen, her ovaries begin to make fully grown egg cells, and after that, an egg cell leaves an ovary about once a month.

Every time an egg cell leaves an ovary, the lining of the uterus fills with an extra supply of blood as the uterus gets ready to take care of a fertilized egg cell. If the egg is not fertilized, it breaks up and leaves the body through the vagina along with the blood that was not needed. This is called *menstruation*

Figure of a Young Girl, 1914.
Pratt, Bela Lyon, 1867-1917.
Boston Museum of Fine Art.



(mĕn strōō ā′ shun). Menstruation begins about ten to fourteen days after the egg leaves the ovary.

You remember that if an egg cell *is* fertilized, it attaches itself to the lining of the uterus and stays there while it grows into a baby. In this case, the extra blood is needed, and it does not leave the body. One of the signs that a baby has started to grow is that menstruation does not occur in the mother.

Menstruation usually occurs for the first time after changes in the form of a girl's body have begun. Most girls are about thirteen years old when they first menstruate, but some girls may be as young as ten or eleven, and others as old as fifteen or sixteen. After menstruation has started, a girl may expect it to occur about once a month until she is middle aged—usually sometime in her forties. However, young girls who have just begun to menstruate may skip a month or more quite often.

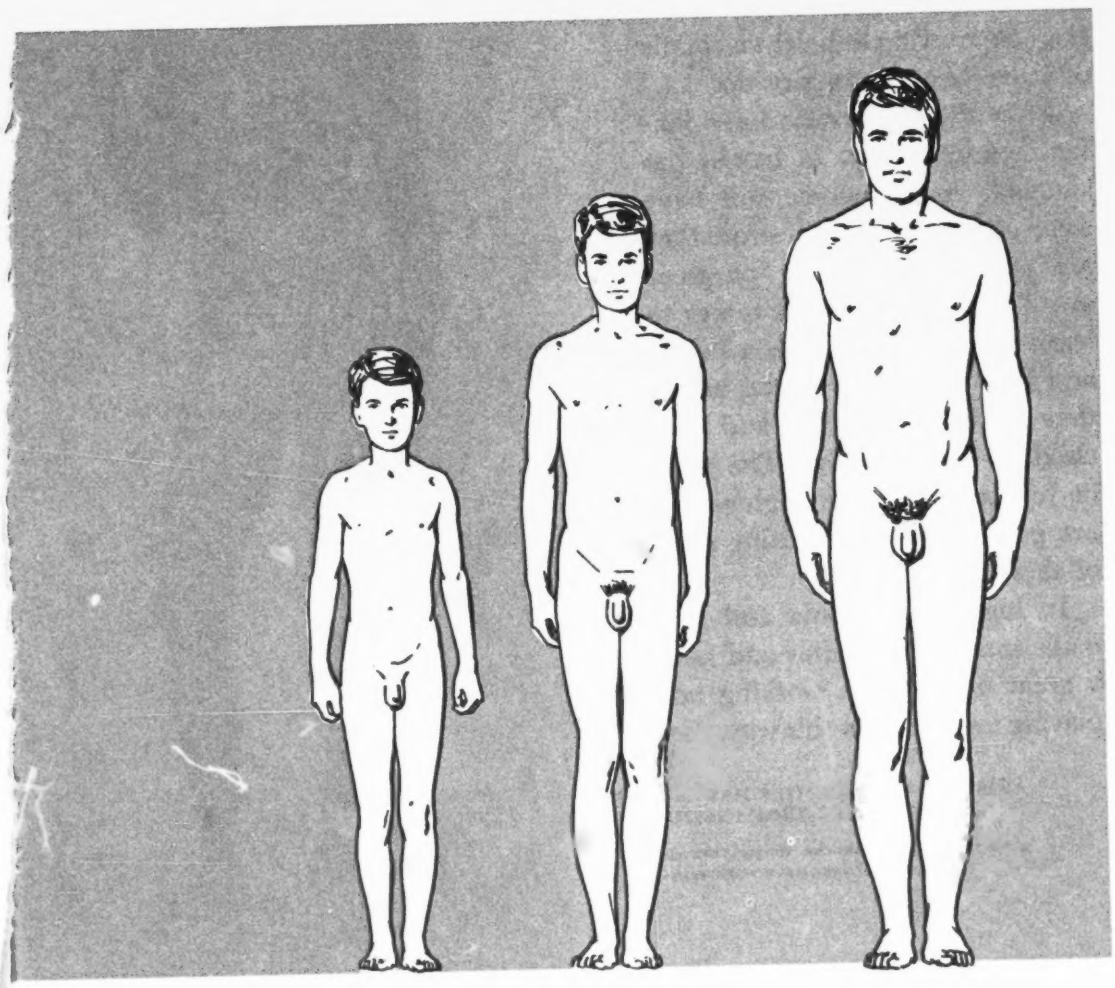
Menstruation usually lasts just a few days each month. During this time, girls wear sanitary pads to protect their clothing. After menstruation is over, the ovaries are ready to make another fully grown egg cell that will start on the same journey all over again.

Menstruation is part of the way in which a girl grows up, and becomes a woman who can nourish a baby inside her body for nine months if she becomes a mother. It is not a sickness. Some girls speak of it as their "period" because it comes at rather regular periods of time.

How Boys Change in Adolescence

The hormone of the pituitary gland that affects sex glands also brings about changes in boys. When boys are twelve or so, they have an increased amount of this hormone. Soon afterwards, the testicles begin to make hormones that cause body changes, and the penis and testicles grow larger. Hair begins to grow on the lower part of the boy's abdomen, and later it grows under his arms. Soon he begins to wonder whether he needs to shave. His body takes on new proportions as he grows larger. His voice changes and deepens too. These changes take several years. While they are going on, the testicles also mature, and begin to make fully grown sperm cells.

During these teen-age years, it may happen that a boy's penis becomes stiff and erect, and the semen is discharged from it unexpectedly. Sometimes this happens at night while he is asleep. This



is called a *seminal emission* (sĕm′ĭ năl ē mĭsh′ŭn). It is a natural thing to happen, and is just part of the changes that take place during the years when a boy is becoming a man. The ability of the penis to become stiff and erect is important, because a father's penis can fit into a mother's vagina and send out the sperm cells only when it is erect.

Sometimes it almost seems as if the hormones play a game among themselves. Just think about it a little. One hormone of the pituitary gland helps you to grow taller through your childhood. After awhile, another hormone of this same pituitary gland signals the sex glands to start maturing. Then the sex glands make hormones. The hormones of the sex glands then seem to put a brake on the spurt of fast growing. After that, growth in height slows down and stops. And this is the reason why you don't just keep on growing, like a tree.

X-ray pictures show that the long bones in a girl's legs have about finished growing when her first menstruation takes place. After that, she will not add very much to her height. Boys usually keep on growing in height a couple of years longer than girls do.

After the sex organs have matured, and growth in height has stopped, young people still have some growing up to do before they are ready to be fully "on their own." There are many things to learn about how to earn a living, and how to make a home, before they are ready to marry and have children of their own. The years in junior and senior high school are good years for learning some of these things.

In high school, boys and girls make many new friends and have a great deal of fun working and playing together. In this way, they

ARISTIDE MAILLOL, DER RADFAHRER
GASTON COLLIN (CIRE PERDUE)

SAMMLUNG GRAF HARRY KESSLER. MIT ERLAUBNIS DER D. D. A.
AUSGESTELLT IN DER GALERIE FLECHTHEIM

learn to choose friends who wear well. Having many friends may help a young person learn something about how to choose a husband or wife. Everyone wants to know how to choose the right person to marry, so that the home will be a happy one for parents and children. Right now, at your age, your father and your mother are your best helpers in choosing your friends, and home is the best place to bring your friends for a good time. There is nothing better than a happy family in a happy home.

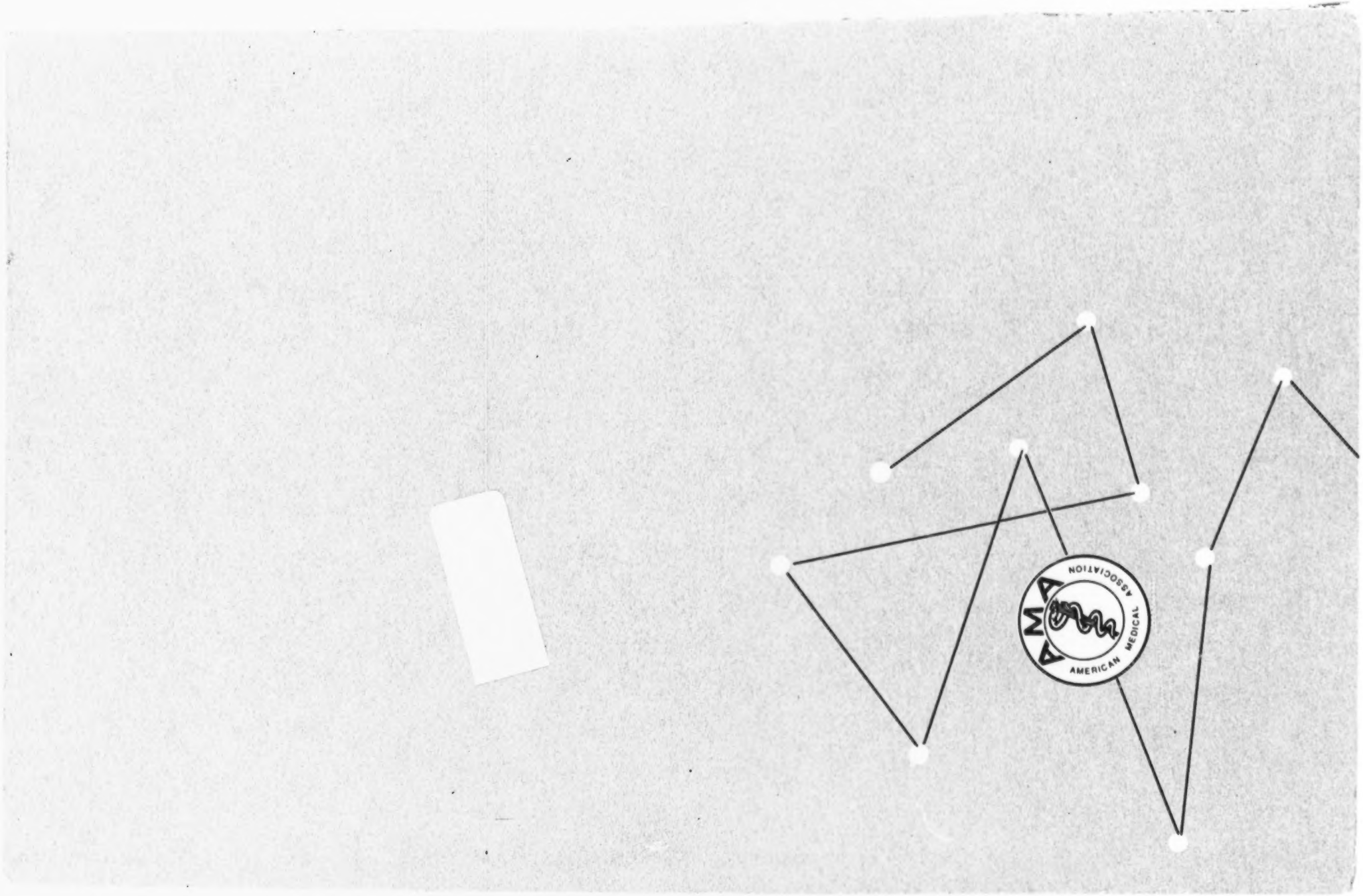
This story about you is really a continued story. This book has told only part of it. You will write the rest of it year after year, as you grow up, and make your own home.

Price: Single copy, 40¢; 50-99, 38¢ each;
100-499, 35¢ each; 500-999, 33¢ each;
1000 or more, 30¢ each.

Printed in U.S.A.

9801-100M-269-B1107

OP 13


AMA
AMERICAN MEDICAL ASSOCIATION